UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

S-6J

Mr. William C. Child, Chief
Bureau of Land
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

RE: Dead Creek Sediment Removal Action - Sauget Area 1 Site
Sauget and Cahokia, St. Clair County, Illinois

Dear ~~Mr. Child~~ Bill,

Thank you for your letter of April 27, 2000, wherein Illinois EPA raised pertinent issues and questions regarding the excavation of contaminated sediments from Dead Creek and the subsequent disposal of these sediments in an on-site Toxic Substances Control Act (TSCA) containment cell. As you know U.S. EPA has been working on a Unilateral Administrative Order (UAO) and Action Memorandum that directs Solutia and Monsanto to conduct this removal action. We have been working with members of your staff over the last few months to accurately define the activities to be conducted under the UAO so that the construction of the on-site containment cell complies with both TSCA and Resource Conservation and Recovery Act (RCRA) requirements. In accordance with your letter and in subsequent discussions with your staff, we have finalized the UAO and Action Memorandum and issued them to Solutia and Monsanto on May 31, 2000.

I would like to take this opportunity to describe how the comments listed in your April 27, 2000, letter have been addressed in the UAO and/or will be covered during the removal action.

On-Site Disposal: U.S. EPA evaluated Illinois EPA's question as to whether off-site disposal at a currently permitted TSCA landfill, similar to U.S. EPA's recent removal action at Site Q (Sauget Area 2), would be as cost-effective as the on-site containment option. Initially when U.S. EPA discussed the sediment removal activity with Solutia, we questioned whether off-site shipment of the sediments would be more cost-effective and asked Solutia to evaluate this option. On November 8, 1999, Solutia provided U.S. EPA and Illinois EPA with an Alternatives Analysis that compared the options of: 1) off-site incineration; 2) off-site disposal; and 3) on-site disposal. Following discussions with Solutia regarding their analysis, a follow-up evaluation was provided on January 5, 2000, that further evaluated the option for off-site disposal. This analysis showed that off-site disposal would cost between $100,000 and $8.7 million (depending on the need for

treatment of the sediments before land disposal) more than on-site disposal. Further, U.S. EPA tasked the U.S. Army Corps of Engineers (Corps) to conduct a separate cost analysis for the two disposal options. The Corps' analysis estimated that on-site disposal would cost approximately $4 million versus $5.3 million for off-site disposal. These cost analyses demonstrate that the on-site disposal option is currently the most cost-effective option for disposal of the Dead Creek sediments.

Scheduling: We believe Illinois EPA's concerns regarding the tight timeframes for initiating the removal action are currently being addressed. Superfund regulations for conducting a time-critical removal action require that the action be started within six months of issuance of the Action Memorandum. In light of this fact, U.S. EPA, with cooperation from Illinois EPA, has been working directly with Solutia over the last six months to work through some of the details of the design for the TSCA cell. As a result of recent discussions with your staff it appears that one staff member from your RCRA program will be dedicated to assisting U.S. EPA in overseeing the design of the TSCA cell. It is our mutual belief that this will facilitate an expedited review and approval of the design and allow us to move into the response action quickly. Several of the scheduling items mentioned in your letter have been, or are in the process of being, addressed and therefore are not expected to significantly delay our progress. For example, some of the hydrogeologic characterization work has already been completed and, as mentioned, work on the design report began six months ago. I want to assure you that it is not the goal of U.S. EPA to expedite the cleanup of this project at the expense of sound engineering.

Strict Compliance with RCRA: As with all removal actions conducted under CERCLA authority, all on-site actions required pursuant to this Order shall, to the extent practicable, attain applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws. It is U.S. EPA's intention to adhere to RCRA regulations in the construction of the containment cell. The UAO has been revised in accordance with your comments to clearly state that the design report shall meet, at a minimum, the RCRA minimum technology requirements. These requirements have also been listed in an attachment to the UAO. RCRA requirements for Construction Quality Assurance (CQA), Operation and Maintenance and Groundwater Monitoring and Corrective Action Program Plans have also been referenced in the UAO. Details relating to the description of the cover system and liner compatibility will be addressed in the design report.

As you requested in your letter, U.S. EPA has evaluated the issue of the applicability of Land Disposal Restrictions (LDRs) as they relate to the proposed removal action in Dead Creek.. After careful consideration, U.S. EPA determined that Creek Segments B, C, D, E and Site M along with the proposed TSCA cell are within the same Area of Concern (AOC) and therefore, the consolidation of waste material within the cell does not invoke any of the LDRs under RCRA. This determination has been documented in the UAO.

Removal of Dead Creek Contaminated Sediments: Illinois EPA's concern regarding the amount of material to be removed from the creek and the possibility of contamination remaining in the

creek following the removal action is something U.S. EPA has also considered during the preparation of the UAO. The depth and volume estimates are based on sampling activities conducted by Solutia in accordance with a currently enforced Administrative Order for a Remedial Investigation of Dead Creek and the surrounding source areas. Further, the actual volume of material to be excavated will also be determined based on a set of criteria listed within the UAO. These criteria include: 1) origin (non-native vs. native sediments), 2) stratigraphy (sediment/soil boundary); 3) color (sediment color vs. creek bottom soil color); and 4) physical characteristics (unconfined compressive strength, torvane shear strength, and moisture content). Decisions regarding the actual volume of sediments to be removed will also be made in the field during the removal action and therefore the final volume to be removed may be less than or in excess of the currently estimated 50,000 cubic yards. It is important to note that despite our current knowledge of sediment depths and volumes as well as the use of the above listed criteria, the possibility exists for leaving behind contamination in the creek that still possibly poses a risk to human health and the environment. The goal of this removal action is, as you mention in your letter, to remove a significant amount of the contamination as quickly as possible. U.S. EPA has been careful to advise Solutia that the removal may not, in fact, eliminate all risks and therefore, any contamination remaining in the creek following the removal will need to be evaluated as part of the non-time critical removal action and/or RI/FS process that will immediately follow this sediment removal action.

Dead Creek Liner: Illinois EPA's questions and concerns regarding the lining of creek segment B following the excavation of sediments in this segment will be addressed as part of the removal action and during the non-time critical removal and/or RI/FS process following the creek sediment removal. The liner requirement for segment B is primarily included to provide a barrier between any possible residual contamination in the creek and any exposed population. The barrier also provides erosion control and will retard any downward movement of residual contamination in the sediments or native soils into the underlying groundwater. Site G borders a small fraction of Segment B and groundwater contamination is already known to exist beneath the northern area of Creek Segment B (likely resulting from Sites H and L as well as Site G). Groundwater and leachate remediation options will be evaluated as part of the RI/FS process which will follow the Dead Creek removal action. It is U.S. EPA's belief that the increased level of protection to human health and the environment as a result of the sediment removal action will significantly outweigh the risks from potential groundwater re-contamination from Site G.

Oversight Support: Both agencies have recently discussed the need for conducting thorough oversight of design and construction activities as part of this project. As mentioned above, it is U.S. EPA's understanding that Illinois EPA is willing to provide a dedicated staff member from your RCRA program for design review support. U.S. EPA is requesting that Illinois EPA provide a cost estimate for the design support. After review of your cost estimate, U.S. EPA will draft a funding and cooperative agreement arrangement for Illinois EPA design support.

I believe U.S. EPA has addressed all of Illinois EPA's concerns regarding the upcoming removal action within Dead Creek. Illinois EPA's knowledge and history with this Site is considered to be

a valuable asset to the future success of any remediation activities. U.S. EPA appreciates your continued assistance and cooperation as we jointly move ahead to address the public health and environmental problems at the Sauget Area Sites. If you have any questions or wish to discuss this letter further, please contact me or any member of my staff.

Sincerely,

Bill Muno

William E. Muno, Director
Superfund Division